

**REMARKS**

This represents a full and timely response to the Non-Final Office Action mailed December 27, 2006. No claims are amended with this response.

Accordingly, claims 2, 3, 5, 6, 14, 15, and 17-24 are presently pending in the application, each of which is believed to be in immediate condition for allowance. Reexamination and reconsideration in light of the following remarks are respectfully requested.

**Declaration under 37 C.F.R. § 1.132**

A Declaration under 37 C.F.R. § 1.132 (“132 Declaration”) is submitted concurrently with this Response. The Declaration was inadvertently omitted from the filing of the previous Amendment of October 16, 2006.

The 132 Declaration contains experimental results demonstrating unexpected and superior results exhibited by the presently claimed invention in comparison with the prior art cited by the Examiner in the Office Action. Consideration of the 132 Declaration in light of the remarks made in the October 16, 2006 Amendment is respectfully requested.

**Note Regarding Claim Amendments in Previous Amendment**

The Amendment submitted on October 16, 2006 contained an error on page 2, in which the heading read “DRAFT AMENDMENTS TO THE CLAIMS.” The heading should have correctly read “AMENDMENTS TO THE CLAIMS.” Appropriate correction is requested.

A full listing of the claims incorporating the amendments submitted on October 16, 2006 is included in this Response.

**Claim Rejections- 35 U.S.C. § 103**

In the Action, claim 1 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Publication No. EP 1 031 726 to Kato et al. (“Kato”) in view of U.S. Patent No. 6,057,393 to Hirai (“Hirai”). Claim 5 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kato in view of Hirai and further in view of U.S. Patent No. 5,780,396 to Tanaka et al. (“Tanaka”). Claims 3, 6, 14, 15, and 17-24 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kato in view of Hirai or over Kato in view of Hirai

and further in view of Tanaka, either of which in view of Publication No. GB 2 258 866 to Niwa et al. (“Niwa”). These rejections are respectfully traversed for at least the following reasons.

Claim 1

Claim 1 was previously canceled in the Amendment of April 3, 2006. Accordingly, Applicants assume the Examiner intended to reject claim 2 under the grounds given in the Office Action in relation to canceled claim 1.

According to Federal Circuit precedent, the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 rests squarely on the shoulders of the Examiner. *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976); *accord*. MPEP 2142. To establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See, e.g.*, *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references”); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) (“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references”); *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) (“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination”); *accord*. MPEP 2143.

Second, there must be a reasonable expectation that the proposed modifications or combination would be successful. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375 (Fed. Cir. 1986); *accord*. MPEP 2143.02.

Finally, the prior art reference (or references when combined) must teach or suggest each and every claim limitation. *See, e.g.*, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord*. MPEP 2143.03.

With respect to the first element of a *prima facie* case of obviousness, it is established law that one “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *Ecolochem, Inc. v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (citing *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988)). Indeed, “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.” *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

In the Office Action, new grounds of rejection were made based on Kato and Hirai.

Kato arguably discloses a piston for a compressor having a **coat layer for coating an aluminum piston** (see *Kato* at paragraphs [0008] and [0028]). The coat layer disclosed is only about 0.020-0.060 mm (20-60  $\mu$ m) in thickness. The coat layer of Kato is comprised of a **fluorocarbon resin** and a binder, which is a **polyamide-imide resin, polyamide resin, epoxy resin, or phenol resin** (see *Kato* at paragraph [0015]). The coat layer further comprises a wear resistant additive, which is **calcium fluoride, zinc oxide, mica, aluminum hydroxide, boron nitride, calcium carbonate, calcium triphosphate, or barium sulfate** (see *Kato* at paragraph [0013]).

In contrast, Hirai arguably discloses a **polymer composition for forming a molded solid sliding member, such as a bearing, cam, toothed wheel, slide plate, or guiding part**. The polymer composition in Hirai is comprised of a majority of **sulfide polymer**, and also necessarily comprises a **low molecular weight PTFE** and a **phosphate**.

Hirai is used in the Office Action in order to show a PTFE having a molecular weight of  $3 \times 10^5$  to  $3 \times 10^7$  and a particle size of 470 microns. The Office Action states, on Page 3: “Given that Hirai discloses the benefits of using a PTFE with the presently claimed molecular weight and particle size in a sliding member, it would have been obvious to one of ordinary skill in the art to utilize such a PTFE in the sliding composition of Kato et al.”

However, the Office Action has failed to provide any evidence showing the motivation to combine Hirai and Kato. As shown above, Kato discloses a coating layer containing fluorocarbon resins while Hirai discloses a molded member containing PTFE resins.

The only similarity in the components of coating composition of Kato and the molding composition of Hirai is the use of PTFE (and PTFE is only one option, not a requirement, in

Kato). As shown above, in addition to fluorocarbon resins, Kato comprises a binder (**polyamide-imide resin, polyamide resin, epoxy resin, or phenol resin**), and a wear resistant additive (**calcium fluoride, zinc oxide, mica, aluminum hydroxide, boron nitride, calcium carbonate, calcium triphosphate, and barium sulfate**). Hirai, on the other hand, comprises, in addition to PTFE, a **phosphate(s)** and a **sulfide polymer**.

Accordingly, the compositions of Kato and Hirai non-analogous art, since they differ significantly in their components and in their uses (a coating composition versus a molding resin). The Examiner has obtained the motivation to combine the PTFE component described in Hirai with the coating composition disclosed in Kato from the disclosure of the present application. Thus, the elements from the prior art cited in the Office Action are only combinable through the use of hindsight reconstruction, and not through any motivation found in the prior art. When determining obviousness under 35 U.S.C. §103, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143, 229 USPQ 182, 187 (Fed. Cir. 1986).

Therefore, because Kato and Hirai, either alone or in combination, fail to disclose, teach or suggest each and every limitation of claim 1, a *prima facie* case of obviousness has not been established, and withdrawal of this rejection is respectfully requested. *See, e.g., In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord*. MPEP 2143.03.

Claim 5

Aside from the novel limitations recited therein, claim 5, being dependent either directly or indirectly upon allowable base claim 2, is also allowable for at least the reasons set forth above. Withdrawal of the rejection of this claim is therefore courteously solicited.

Claims 3, 6, 14, 15, and 17-24

Based on the foregoing discussion, Applicants further submit that with respect to independent claim 3, the Office Action has also not established a *prima facie* case for obviousness. Thus, Applicants respectfully request withdrawal of the rejection of claim 3 under 35 U.S.C. §103, and allowance of this claim.

Moreover, aside from the novel limitations recited therein, claims 6, 14, 15, and 17-24, being dependent either directly or indirectly upon allowable base claims 2 and 3, are also allowable for at least the reasons set forth above. Withdrawal of the rejection of these claims is therefore courteously solicited.

Additionally, according to Federal Circuit precedent, the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 rests squarely on the shoulders of the Examiner. *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976); *accord*. MPEP 2142. To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See, e.g., Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references”); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) (“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references”); *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) (“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination”); *accord*. MPEP 2143.

The secondary references used in this rejection, i.e. Tanaka and Niwa, both relate to sliding materials having specific compositions. Accordingly, Kato differs from Tanaka and Niwa in terms of the field of utilization and the required properties. Accordingly, one skilled in the art would not be motivated to combine the teachings of either Tanaka or Niwa with the teachings of Kato, and the combination of the references constitutes mere hindsight reconstruction. Withdrawal of this rejection is therefore courteously solicited.

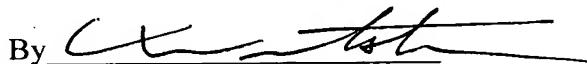
**CONCLUSION**

For at least the foregoing reasons, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the examiner is respectfully requested to pass this application to issue. If the examiner has any comments or suggestions that could place this application in even better form, the examiner is invited to telephone the undersigned attorney at the below-listed number.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. ASA-0014 from which the undersigned is authorized to draw.

Dated: March 27, 2007

Respectfully submitted,

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Attachment: Declaration under 37 C.F.R. § 1.132